

Appl. No. 10/055,301
Amdt. Dated August 15, 2005
Reply to Office Action of May 13, 2005

REMARKS

Claims 1, 3-16, and 18-29 are pending before this amendment. Claims 2 and 17 were previously canceled. Claims 1, 19, and 28 are presently amended. Applicants gratefully acknowledge the Examiner's statement that claims 5 and 6 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 5 and 6 have been rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 30 is added to alternately claim the invention. Applicants respectfully request reconsideration and allowance of all pending claims of this application.

Applicants gratefully acknowledge the telephonic interview of August 12, 2005, in which a proposed amendment to place the application in condition for allowance was discussed. No agreement was reached.

The paragraph added to the specification, above, is supported at least by U.S. Pat. No. 5,413,874, Col. 4, lines 38-48, which has been specifically incorporated by reference at page 4, line 14 of the present application. No new matter has been introduced.

Claims 19-27 are rejected under 35 U.S.C. § 112, first paragraph, for assertedly failing to comply with the written description requirement. Applicants respectfully traverse the rejection under 35 U.S.C. § 112, first paragraph. Support for the limitation that the "concentration of the additional element is essentially the same as the concentration of the additional element in the metal-bearing color layer" is found at least in Figure 2. Support for the limitation of "PVD process in which a target is bombarded in a chamber to which are supplied one or more gases containing at least one additional element selected from carbon, nitrogen, and oxygen" is found at least at the paragraph spanning pages 4 and 5 of the application, which is paragraph 14 in the published 2003/0139106 A1. Moreover, applicant has added a paragraph to the specification, above, that provides support for the terminology without adding new matter. The term "bombarded" in claims 19 and 28 has been replaced with "placed" for clarity and does not further limit the application.

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Support for the limitation "wherein the transition layer when formed by the PVD process and before contact with the atmosphere contains only C, N and the metal or metal alloy" can be found at least in Figures 2 and 3. The limitation "the supply of gases containing the additional element being gradually terminated during growth of the transition layer" has been deleted. PVD processes are known in the art. See page 4, lines 6-10 (corresponding to paragraph 0013 of published 2003/0139106).

Claim 19 is supported for various targets at least at page 12, lines 2-9 (paragraph 0031 of 2003/0139106), reciting Zr, Ti, Hf, gold, silver, platinum, platinum group metals, chromium, stainless steel and alloys thereof, as satisfactory targets.

Applicants, therefore, respectfully request withdrawal of the rejections under 35 U.S. § 112, first paragraph.

Claims 19 and 28 have also been amended for consistency between claim 1 and claim 19 regarding the terms "first composition" and "second composition." These amendments do not narrow the claim.

Naik '773

Claims 1, 8, 10-12, and 14-16 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by U.S. Pat. No. 4,919,773 to Naik.

Claim 1 of the present application claims "an exterior first composition comprising a metal." The Office Action asserts that Naik '773 teaches a hard outer layer of aluminum oxide, and that aluminum oxide comprises aluminum. Thus, the Office Action asserts that the aluminum oxide of Naik '773 meets the claim limitation of "comprising a metal." The Office Action suggests that amending the claim to "consisting of a metal" may be advisable because of the breadth of the term "comprising."

Applicants have amended the claim to "consisting of a metal, as deposited." This amendment is supported by the specification. *See, for example*, page 7, lines 6-14, corresponding to ¶ 21 as published in 2003/0139106 A1. The aluminum oxide as it is deposited as the exterior layer in Naik '773 is thus excluded from the claimed "consisting of a metal, as deposited."

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Naik '773 teaches deposition of a boride, carbide, nitride, or oxide onto a metal so that the boride, carbide, nitride, or oxide is the exterior layer. *See, for example*, Col. 2, lines 63-65; claim 1. In contrast, the present application, as amended, claims that the exterior composition consists of a metal, as deposited. The deposition is a metal, not a boride, carbide, nitride, or oxide.

Applicants believe that this amendment eliminates the basis for rejection over Naik '773 and respectfully requests withdrawal of the rejection of the claims under 35 U.S.C. § 102(b) based on Naik '773.

Naik '773 does not disclose an article of manufacture having a transition layer with a first exterior composition that provides corrosion resistance and a second composition beneath the exterior composition that determines the visible color of that portion of the article surface to which the transition layer is applied, as claimed in claim 15. Color is not discussed in Naik '773.

Randhawa '517

Claims 1, 3-4, and 7-16, and 18-29 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by U.S. Pat. No. 5,037,517 to Randhawa. Applicants respectfully traverse this rejection and request reconsideration and withdrawal of the rejection.

The Office Action Improperly Mixes Three Different Separate Embodiments

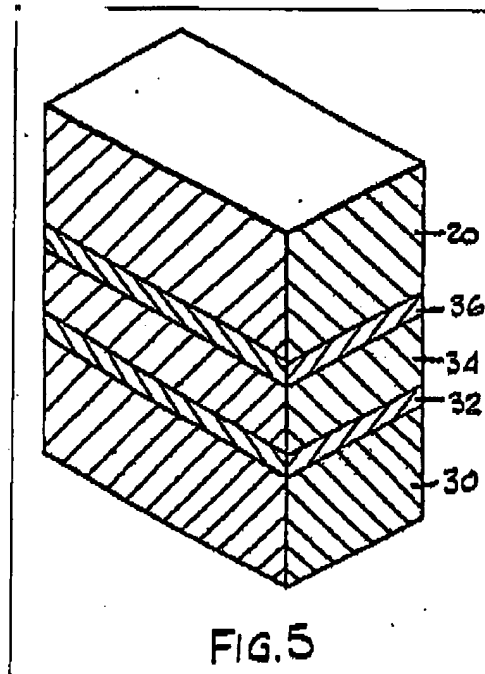
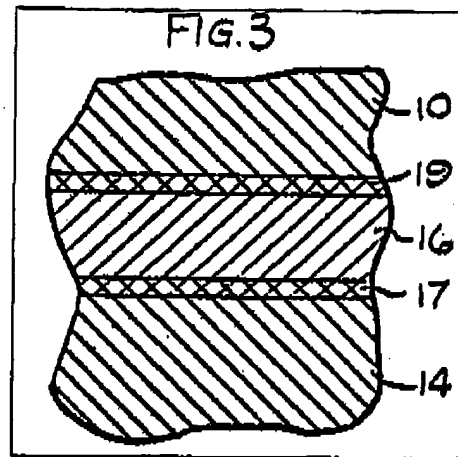
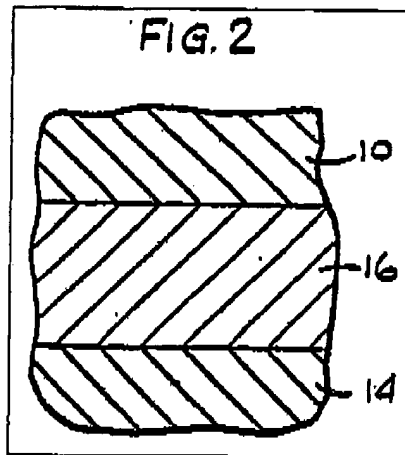
The Office Action improperly intermingles and intermixes the various embodiments of Randhawa '517 to arrive at the present invention.

Randhawa '517 discloses three different embodiments. The first embodiment is illustrated in Figures 1 and 2. Column 3, line 31 through Column 4, line 11. The second embodiment is illustrated in Figure 3. Column 4, lines 12-44 ("Fig. 3 illustrates another embodiment . . ."). The third embodiment is illustrated in Figures 4 and 5. Column 4, line 45 through Column 6, line 39 ("Figures 4 and 5 illustrate another layered structure . . .") Table I sets forth test results from the third embodiment. Column 4, lines 62 through 66. Each of the three embodiments is illustrated below.

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The Office Action asserts that Randhawa '517 "discloses an article having a transparent layer of about 25–50 angstroms and two graded/transitional layers (e.g. see Figure 3; claims 1-9;

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column 3, line 67–column 4, line 44).” This refers to the second embodiment. The Office Action then asserts “One composition can be gold and another layer can be zirconium and/or zirconium carbonitride (e.g. see table I).” This refers to the third embodiment. The Office Action further asserts “Randhawa clearly discloses that the gold outer layer (10) will wear away and expose the transparent layer (16) which in turn will allow for the color layer (14) to show through (e.g. see column 3, line 67 - column 4, line 11).” This refers to the first embodiment.

“Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick*, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). See also MPEP § 2131. Randhawa ‘517 does not have a transition layer as claimed and as arranged in the present application, because the different separate embodiments are improperly intermingled.

The Office Action improperly takes the teaching associated with each of three different embodiments, illustrating different combinations and compositions of layers, and combines and applies those against the present claimed application as if they were a single embodiment. Randhawa ‘517 does not disclose every element of the claimed invention arranged as in the claim. Thus, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(b) based on Randhawa ‘517.

Wearing of the External Gold Layer Will Not Disclose a Transparent Layer As Claimed

The assertion of the Office Action that Randhawa ‘517 discloses wearing away of the outer gold layer 10 to expose the transparent layer 16 is only in the context of the first embodiment, which does not include any transition layer. Only the second embodiment (Figure 3) discloses transition layers 17, 19. Contrary to the assertion of the Office Action, if the gold layer 10 of the second embodiment were to wear away, the transition layer 19 would be exposed, not a transparent layer 16.

Importantly, if the gold layer 10 of Randhawa ‘517 does wear off to expose transition layer 19, there is no teaching that the transition layer 19 comprises “an exterior first composition

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consisting essentially of a metal, as deposited," as claimed in the present application, as amended.

Randhawa '517 does not disclose that the transition layer 19 would wear away to expose the transparent layer 16 or that the transition layer 19 is "substantially transparent and colorless to visible light" as claimed in claim 1 of the present application. The function of this layer is "to further enhance the adhesive strength of the layered structure," Column 4, lines 42-44. This layer need not be transparent to accomplish its stated function. So, even if the gold outer layer 10 wears away to expose the transition layer 19 of Randhawa '517, all of the elements of present claim 1 are not disclosed in Randhawa '517.

Thus, Randhawa '517 does not anticipate claim 1 of the present application and Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(b) based on Randhawa '517.

There Can Be No Intermediate Article

The Office Action also asserts "that since the layered article of Randhawa is made in sequential coating steps, the intermediate article of Randhawa before the final gold coating step would anticipate the claimed article." The Office Action fails to appreciate that Randhawa '517 teaches no such intermediate exists before a final gold coating step.

In discussing the creation of transition layer 19 and the external gold layer 10 in the context of the second embodiment (the only embodiment with transition layers), Randhawa '517 states that application of the external gold layer 10 begins before cessation of the application of the transition layer 19. Column 4, lines 34-44. The process is continuous with no intermediate article in existence. "[A]n overlap of the two processes occurs, thereby producing the graded or gradual interface between the layers." Column 4, line 39-41. This overlap of the two processes is what actually produces the transition layer 19. Thus, there is no period of time in which there can be such an intermediate article that would anticipate the article claimed in claim 1 of the present application.

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Thus, Randhawa '517 does not anticipate claim 1 of the present application and Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(b) based on Randhawa '517.

Randhawa '517 does not disclose an article of manufacture having a transition layer with a first exterior composition that provides corrosion resistance and a second composition beneath the exterior composition that determines the visible color of that portion of the article surface to which the transition layer is applied, as claimed in claim 15.

The dependent claims are allowable as dependent from allowable independent claims as well as being separately allowable.

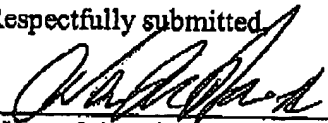
Arguments and comments from previous Office Action responses are incorporated herein by reference to the extent that they are applicable to the present claims and rejections.

Conclusion:

In view of the above remarks and amendment, it is submitted that claims 1, 3-16, and 18-30 are in condition for allowance. Applicants respectfully request withdrawal of the rejections and respectfully request prompt notice of allowance.

Respectfully submitted,

8/15/05
Date


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CERTIFICATE OF FACSIMILE TRANSMITTAL

I hereby certify that this document is being transmitted
via Facsimile to the Commissioner for Patents,
Fax No. (571) 273-8300, on this 15th
day of August, 2005.

Signed: Joyce Ford